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स्वत : विमोचन 7/24 टेपर और चाबी वाले स्टब मिलिंग आर्बर — विशिष्टि

(पहला पुनरीक्षण)

Indian Standard

STUB MILLING ARBORS WITH SELF-RELEASE 7/24 TAPER AND WITH KEY — SPECIFICATION

(First Revision)

UDC 621·914 : 621·9-229·22 : 621·9-434·5

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

December 1993

Price Group 3

Milling Cutters, Saws, Gear Cutting Tools and Broaches Sectional Committee, PE 11

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Milling Cutters, Saws, Gear Cutting Tools and Broaches Sectional Committee had been approved by the Production Engineering Division Council.

This standard was first published in 1977. In this revision various sizes and tolerances have been brought in line with the practices followed at international level and in the industry.

The committee responsible for the formulation of this standard is given at Annex A.

During revision of this standard considerable assistance has been drawn from DIN 6360 - 1983 Milling machine arbors with 7/24 tapers for milling cutters with longitudinal and transverse drive issued by the Deutsches Institut für Normung (DIN).

For the purpose of deciding, whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

STUB MILLING ARBORS WITH SELF-RELEASE 7/24 TAPER AND WITH KEY — SPECIFICATION

(First Revision)

1 SCOPE

This standard covers the dimensions and general requirements for stub milling arbors with self-release 7/24 tapers and with key.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	*Title*
2048 : 1983	Parallel keys and keyways (*second revision*)
4218 (Part 5) : 1979	ISO metric screw threads : Part 5 Tolerances
6285 : 1971	Dimensions for interchangeability of milling cutters and milling arbors with key drive
8611 : 1988	Technical supply conditions for milling arbors and accessories (*first revision*)
8621 : 1977	Retaining screws for milling arbors

3 DIMENSIONS

3.1 The diameters which have been adopted in this standard are those most commonly used and correspond to the values given in IS 6285 : 1971.

3.2 The shoulder whether parallel or tapered between the flange of diameter d_3 and the parallel portion of diameter d_1 is optional. With or without the shoulder, however, the diameter of the flange locating face shall not in any case be less than d_2.

3.3 Arbor dimensions shall be as given in Table 1.

4 GENERAL REQUIREMENTS

4.1 The tolerance for screw threads shall be 6H according to IS 4218 (Part 1) : 1979.

4.2 Retaining screw shall be according to IS 8621 : 1977.

4.3 Material, geometrical accuracies and other requirements not covered in this standard shall be according to IS 8611 : 1988.

4.4 Key shall be according to IS 2048 : 1983.

5 TEST

Testing shall be carried out according to IS 8611 : 1988.

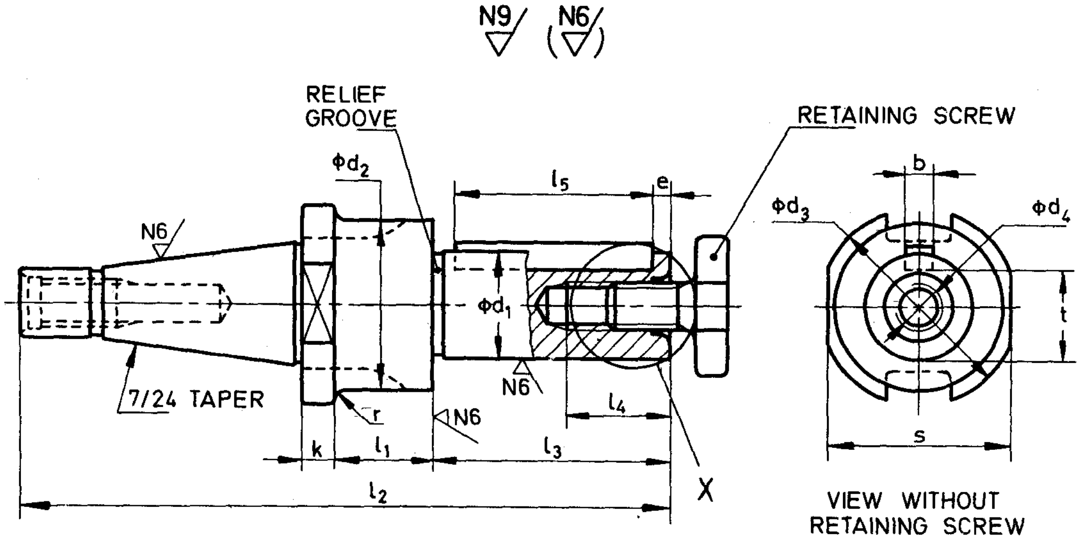
6 DESIGNATION

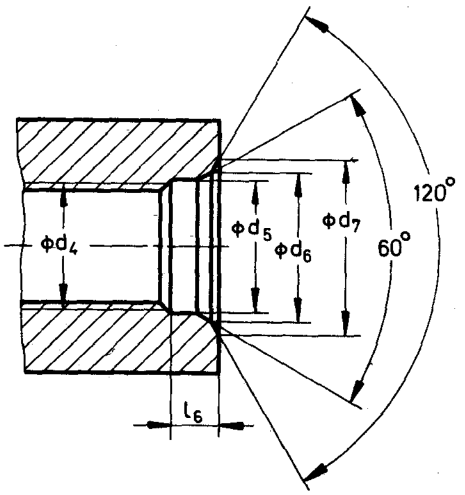
6.1 A stub arbor complete, with self-release 7/24 taper 40 having arbor diameter d_1 = 40 mm, collar length l = 25 mm including parallel key and retaining screw and conforming to this standard shall be designated as:

Stub Arbor with Key 7/24 Taper IS 8616 40 × 40 × 25

Table 1 Dimensions for Stub Milling Arbors with Self-Release 7/24 Taper and With Key

(*Clause* 3.3)





DIMENSIONS OF COUNTERBORE AT X

All dimensions in millimetres.

7/24 Taper No.	d_1 $h6$	l_1	b $p9$	d_2	d_4 $6H$	d_5	d_6	d_7	e	l_2	l_3	l_4 *Min*	l_5	l_6	t		d_3	k	r	s $h15$
															Size	Tol				
30	10	25	3	20	M 5	5·3	6	7	2	119	16	12	12	3	8·2	0 -0·1	50	8	3	46
		63								157										
	13	25		23	M 6	6·3	7·2	8·5	3	128	25	16	18	3	11·2	0 -0·1				
		63								166										
	16	25	4	28	M 8	8·4	9·5	11·5	3	133	30	20	22	4	13·2	0 -0·1				
		63								171										

Table 1 (*continued*)

7/24 Taper No.	d_1 h6	l_1	b p9	d_2	d_4 6H	d_5	d_6	d_7	e	l_2	l_3	l_4 Min	l_5	l_6	t		d_3	k	r	s h15
															Size	Tol				
30	22	25	6	36	M10	10·5	12	14	4	143	40	22	32	4·5	17·6	0 -0·2	50	8	3	46
		63								181										
	27	25	7	43	M12	13	15	17	4	163	60	26	50	5·5	22	0 -0·2				
		63								201										
40	16	25	4	28	M 8	8·4	9·5	11·5	3	160	30	20	22	4	13·2	0 -0·1	63	10	3	55
		63								198										
		160								295										
	22	25	6	36	M10	10·5	12	14	4	170	40	22	32	4·5	17·6	0 -0·2				
		63								208										
		160								305										
	27	25	7	43	M12	13	15	17	4	190	60	26	50	5·5	22	0 -0·2				
		63								228										
		160								325										
	32	25	8	48	M16	17	19	22	4	190	60	30	50	6	27	0 -0·2				
		63								228										
		160								325										
	40	25	10	56	M20	21	23	26	4	190	60	34	50	7	34·5	0 -0·2				
		63								228										
		160								325										
45	16	25	4	28	M 8	8·4	9·5	11·5	3	177	30	20	22	4	13·2	0 -0·1	63	10	3	65
		63								215										
		160								312										
	22	25	6	36	M10	10·5	12	14	4	187	40	22	32	4·5	17·6	0 -0·2				
		63								225										
		160								322										
	27	25	7	43	M12	13	15	17	4	207	60	26	50	5·5	22	0 -0·2				
		63								245										
		160								342										
	32	25	8	48	M16	17	19	22	4	207	60	30	50	6	27	0 -0·2				
		63								245										
		160								342										
	40	25	10	56	M20	21	23	26	4	207	60	34	50	7	34·5	0 -0·2				
		63								245										
		160								342										

Table 1 (*concluded*)

7/24 Taper No.	d_1 $h6$	l_1	b $p9$	d_2	d_4 $6H$	d_5	d_6	d_7	e	l_2	l_3	l_4 Min	l_5	l_6	t		d_3	k	r	s $h15$
															Size	Tol				
50	22	25	6	36	M10	10·5	12	14	4	207	40	22	32	4·5	17·6	0 -0·2	100	12	3	90
		63								245										
		160								342										
	27	25	7	43	M12	13	15	17	4	227	60	26	50	5·5	22	0 -0·2				
		63								265										
		160								362										
	32	25	8	48	M16	17	19	22	4	227	60	30	50	6	27	0 -0·2				
		63								265										
		160								362										
	40	25	10	56	M20	21	23	26	4	227	60	34	50	7	34·5	0 -0·2				
		63								265										
		160								362										
	50	25	12	70	M24	25	28	32	4	227	60	40	50	8	44·5	0 -0·2				
		63								265										
		160								362										

ANNEX A

(*Foreword*)

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Printed at Printrade, New Delhi, India